

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-39 are presently active in this case, Claims 1, 13 and 35 amended by way of the present amendment.

In the outstanding Official Action, the Election Restriction Requirement was made final and Claims 11, 12, 16-25, 29, 38 and 39 were withdrawn from consideration; the drawings were objected to under 37 C.F.R. § 1.83(a); Claims 1-10, 13-15, 26-28 and 30-37 were rejected under 35 U.S.C. § 112, first paragraph.

Claims 4-6 and 35 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 2, 8, 10, 13, 14 and 26 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,323,292 to Brezezinski; Claims 7, 27 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brezezinski in view of Official Notice. Claims 9, 15, 30-34, 36 and 37 were not rejected over prior art thereby indicating these claims as allowable if amended to overcome the rejections under 35 U.S.C. § 112, first and/or second paragraphs.

First, Applicants wish to thank Examiner Vortman for the June 29th and June 30th telephone discussions at which time amendments and arguments substantially as indicated in this response were discussed. Examiner Vortman indicated that the amendments and arguments presented would overcome all rejections in the May 3, 2005 Office Action, however further search and consideration is needed.

With regard to the objection to the drawings, Applicants have amended Claim 35 to eliminate any reference to a plasma. As discussed in the June 30th interview, the external heat flux and a heating component being absent would be understood by one of ordinary skill in the art from the existing figures and no amendment to the drawings is necessary. Examiner

Vortman agreed that elimination of the term plasma from Claim 35 would overcome the drawing objection to this claim.

With regard to the rejection under 35 U.S.C. § 112, first paragraph, Claims 1 and 13 have now been amended to clarify the structural relationship between the exterior supporting surface and the heating and cooling components. As discussed in the June 30th interview, these amendments to Claims 1 and 13 overcome the rejection under 35 U.S.C. § 112, first paragraph.

With regard to the rejection under 35 U.S.C. § 112, second paragraph, Applicants note that Claims 4-6 were rejected for use of the terms “surface is rough” and “surface is smooth.” Applicants submit that use of the terms rough and smooth is not use of a relative terminology as described in M.P.E.P. § 2173.05(b). Moreover, as discussed in the June 30, 2005 personal interview, to the extent that these terms are relative terminology, § 2173.05(b) explains that relative terminology may be acceptable in the claim if one of ordinary skill in the art would understand what is claimed in light of the specification. Applicants’ specification, at least at paragraph 26, explains that the term “smooth” relates to a polished surface whereas the term “rough” relates to a polished surface that has undergone a roughening process such as sandblasting. As discussed in the June 30, 2005 personal interview, this explanation in the specification provides a sufficient standard for one of ordinary skill in the art to understand the meaning of the claim terminology objected to. By way of this explanation, the rejection under 35 U.S.C. § 112, second paragraph is believed to be overcome and no further rejection on this basis is anticipated. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually satisfactory claim language.

Turning now to the merits, in order to expedite issuance of a patent in this case, Claims 1 and 13 have been amended to clarify the patentable features of the present invention

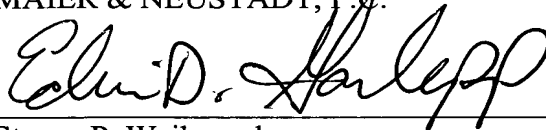
over the cited references. Specifically, Applicants' Claim 1 recites a substrate holder having an exterior supporting surface configured to support a substrate, a coolant component positioned within an interior of the substrate and a heating positioned within the interior of the substrate holder between an opposite side of the supporting surface and the cooling component. Also recited is a contact volume position between the heating component and the cooling component, and formed by a first internal surface and a second internal surface. A thermal conductivity between the heating component and the cooling component is increased when the contact volume is provided with a fluid. Thus, as noted above, Claim 1 has been amended to clarify the structural relationship between the exterior supporting surface and the cooling and heating components. Claim 13 has been similarly amended.

In contrast, the cited reference to Brezezinski discloses a multi-chip module having a heat transfer interface to adapt to variations in the height and angle of integrated circuit chips and to achieve a thermal energy path between each chip and a heat sink. As seen in Figure 1 of Brezezinski, the multi-chip module includes a substrate chamber 24 containing a substrate 26 with a plurality of Integrated Circuits (ICs) 28, 30, 32, 34, 36 and 38 mounted thereon. A metallic membrane 56 separates the ICs from a chamber having a thermally conductive fluid 58 therein. Surrounding the substrate chamber and thermally conductive fluid is a heat exchanger assembly having a first heat exchanger 12 positioned adjacent to the thermally conductive fluid, and a second heat exchanger 14 positioned adjacent to the substrate 26. However, as discussed in the June 30, 2005 personal interview, this configuration does not disclose the exterior supporting surface in relation to the cooling and heating components as now recited in Applicants' Claims 1 and 13. Therefore, Claims 1 and 13 patentably define over the cited reference to Brezezinski. As Claims 2-10, 26-28 and 30-37 depend from Claim 1, and Claims 14-15 depend from Claim 13, these dependent claims also patentably define over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for a formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Steven P. Weihrouch
Registration No. 232,829

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

Edwin D. Garlepp
Registration No. 45,330